ican Universities. In every case our invitation to join the Committee has been most cordially responded to and the consent has in many instances been accompanied by expressions of the greatest sympathy and encouragement. The list as it stands practically includes the leading mathematicians of the whole world.

It has been estimated that a capital sum of 5000 dollars will be sufficient for the proposed endowment and of this about one-half has already been subscribed here. In appealing to the American public to enable us to complete the desired sum I am in the first place prompted by the consideration that Sylvester's association with the Johns Hopkins University and the leading part which he took in advancing mathematical science in America renders his claim to estimation on the part of the citizens of your country quite a special one. It is but a modest endowment that we are asking for and I am sure that all those who were personally acquainted with him and who realize the great influence which he exerted in raising the intellectual level of every Institution with which he was associated will be glad of this opportunity of coöperating in the movement.

It is proposed that the fund when complete shall be transferred to the Council of the Royal Society of London, that body having undertaken to accept the trust and to award the medal triennially to mathematicians of all countries. I can hardly venture to trespass upon your courtesy to the extent of asking you to print the complete list of our Committee, but for your own information I beg to send a copy herewith. It will be sufficient to state that it comprises the names of President Gilman of the Johns Hopkins University, of Professor Simon Newcomb of Washington, of Professor Willard Gibbs of Yale, of Professor Peirce of Harvard, and many other well known American men of Science. Subscriptions may be sent to and will be acknowledged by Dr. Cyrus Adler, the Smithsonian Institution, Washington, or by Dr. George Bruce Halsted, President of the Academy of Science, 2407 Guadalupe Street, Austin, Texas.

I am, Sir, Yours obediently,

RAPHAEL MELDOLA,

Professor in the Finsbury Technical College, London, England.

Hon. organizing Secretary to the Sylvester Memorial.

December 1897.

BOOKS AND PERIODICALS.

School Algebra Complete. By Fletcher Durell, Ph. D., and Edward R. Robbins, A. B., Mathematical Masters in the Lawrenceville School. 392 pages. 1898. Harrisburg, Pa.: R. L. Myers & Co.

The effort of the authors has been to simplify principles and make them attractive, by showing as plainly as possible the practical reason for each step or process. The theory of the subject is developed by showing that new symbols are introduced into algebra for the sake of definite advantages in representing numbers, and that the fundamental laws governing their use derive their importance from the economies which they make possible

in dealing with the symbols for numbers. It is here shown that each successive step is taken up for the sake of the new power which it gives as compared with previous processes. While following this line in the development of the subject, no radical departures are made in this book, both the order of topics and the treatment in other respects following closely the best practice as presented in the text-books most used at present.

The selection of examples seems to have been made with excellent judgement and especial care has been exercised in their gradation. The completeness of the book is aided by the addition of valuable short chapters on Permutations and Combinations, Undermined Coefficients, The Binomial Theorem, Continued Fractions, and Logarithms. The treatment in this work is clear and satisfactory, and especially so in the important subjects of factoring, fractions, exponents, and radicals. The authors are practical and successful teachers, and their book contains a very fair presentation of the latest and best methods of treating the subject. J. M. C.

The Equations of Hydrodinamics in a form suitable for application to Problems connected with the Movements of the Earth's Atmosphere. Prepared at the request of Willis L. Moore, Chief of Weather Bureau. By Joseph Collier, Columbia University. Published by authority of the Secretary of Agriculture. Folio Pamphlet, 8 pages.

A New Astronomy for Beginners. By David P. Todd, M. A., Ph. D., Professor of Astronomy and Director of the Observatory, Amherst College. 12mo. Cloth, 480 pages, with colored plates and copious illustrations. Price, $1.30. New York, Cincinnati, and Chicago : American Book Co.

This is by far the most interesting and attractive elementary astronomical work we have seen. Everything in the book is of high scientific and educational value. The illustrations are very artistic and so developed as to give the student an impressive notion of the objects illustrated. We very highly commend this work to all who are looking for a first-class elementary astronomy. B. F. F.

On the Commutator Groups. By Dr. G. A. Miller. Reprinted from the Bulletin of the American Mathematical Society, being a paper read before the Society at its Fourth Summer Meeting, Toronto, Canada, August 17, 1897.

An Algebraic Arithmetic, being an Exposition of the Theory and Practice of Advanced Arithmetic based on the Algebraic Equation. By S. E. Coleman, B. S., William Whitney Fellow at Harvard University, formerly Instructor in Mathematics in the Oakland High School, Oakland, Cal. 8vo. Cloth, 151 pages. Price, 50 cents. New York : The Macmillan Co.

This is another one added to a number of arithmetics recently published which if extensively used in the publish schools will go far towards breaking down the barriers between arithmetic and algebra. This book and others of its kind will be considered by ye pedagogue of ye olden times as an iconoclast. But let it be; from the broken images will rise better results for the mathematics of the future. Of course, it is probable that pupils will always have to commit to memory the multiplication table and to learn other facts about numbers, but when these facts are well fixed in the mind, why continue to manipulate figures as the symbols of numbers when other and simpler characters may be used to represent a number which is represented by a great many figures? To economize time, to facilitate computations, and to secure better results in teaching elementary mathematics is precisely the purpose of this book. It often makes use of letters to represent number, and introduces the equation from the first. B. F. F.

The Annals of Mathematics. Edited by Wm. H. Echols. Published under the auspices of the University of Virginia. Bi-Monthly, price $2.00 per year in advance.

The October (1897) number of the *Annals of Mathematics* contains the following articles: The Analytical Representation on a Power of Prime Number of Letters with a Discussion of the Linera Group, by Dr. L. E. Dickson; Note on Integral and Integro-Geometrico Series, by Prof. Edward Drake Roe; Note upon a Representation in Space of the Ellipses Drawn by an Ellipsograph, by Prof. E. M. Blake. B. F. F.

The Cosmopolitan. An International Illustrated Monthly Magazine. Edited by John Brisben Walker. Price, $1.00 per year in advance. Single number, 10 cents. Irvington-on-the-Hudson.

The principal articles of the February number are: The Selection of One's Life Work, by E. Benjamin Andrews; The Great Electric Trust, by Francis Lynde; and Personnel of The Supreme Court, by Nannie-Bille Maury.

The American Monthly Review of Reviews. An International Illustrated Monthly Magazine. Edited by Dr. Albert Shaw. Price, $2.50 per year in advance. Single number, 25 cents. The Review of Reviews Co., 13 Astor Place, New York.

Cuba, Hawaii, and China furnish the principal topics discussed editorially in the *American Monthly Review of Reviews* for February. There are also a few paragraphs of pointed comment on current domestic politics—the factional differences between Ohio Republicans and the swelling tide of Crokerism in the Democratic party. The editor gives his views on Tammany's attitude toward the New York rapid-transit problem and on the reckless expenditure of canal-improvement funds by the Republican bosses of the State.

SOME ERRATA IN DECEMBER NUMBER.

Page 316, line 14, for "$[ac=bd]$" read $[ac+bd]$.

Page 317, lines 20 and 21, in all denominators, for "x^2-y^2" read x^2-yz.

Page 317, line 21, in numerator, for "$[x^2+y^2]$" read $[x^2+yz]$.

Page 317, line 22, for "$[x^2-y^2]$" read $[x^2-yz]$.

Page 318, line 4, for "(1), (5) and (6)" read (1), (10) and (11).

Page 320, Fig. 1 should be reversed in position to correspond to Figs. 2 and 3.

Page 320, line 15, for "$+h\cot[\theta+\alpha]$" read $-h\cot[\theta+\alpha]$.

Page 320, line 18, where "x/z" occurs read $x/2$.

Page 320, line 21, read $[\frac{1}{3}\pi h][x/2]z$.

Page 321, line 14, read $[b-a]^2$ in the first denominator.

Page 322, line 12, for "$\angle DAC$" read $\angle DAB$.

Page 322, line 14, insert) at end of line.

Page 322, in Fig. 3, E and H should be interchanged.

Page 322, line 22, for "$\left(1+\dfrac{s\sqrt{\beta^2+1}}{a\beta}\right)$" read $\left(1-\dfrac{s\sqrt{\beta^2+1}}{a\beta}\right)$.

Page 323, line 2, for "$[+\beta]$" read $[k+\beta]$.

Page 323, line 5, insert } before $=$.